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Memo

DATE: *January 25, 2002*

TO: RHIC E-Coolers

FROM: *Ady Hershcovitch*

SUBJECT: **Minutes of the January 25, 2002 Meeting**

Present: Ilan Ben-Zvi, Michael Harrison, Ady Hershcovitch, Jorg Kewisch, William MacKay, Satoshi Ozaki, Stephen Peggs, Triveni Srinivasan-Rao, Dejan Trbojevic, Dong Wang, Jie Wei.

Topics discussed: RF Cavities, R&D Plan/939 Setup, Simulations, LDRD.

RF Cavities: Ilan opened the meeting by referring to the comprehensive talk he gave last week on RF cavities. Basically, the TESLA cavity parameters described in his talk can be used with two changes. One needed modification is to increase the DESY connection pipe surface area of. It should not be a problem, since it was successfully done in Rossendorff.

A second modification may be needed in the strength of coupling. Our system does not require as much power. A clarification is needed. We may be able to use solid state RF generators instead of klystrons.

R&D Plan/939 Setup: Ilan has been working on a 5-phase schedule that is based on the short-term needs of building 939 setup. Phase 1, start with the superconducting RF gun and a beam dump. Phase 2, add a superconducting LINAC. Phase 3, add energy recovery. Phase 4, stretch bunches. Phase 5, 2 meter test solenoid. Transition from low to high current will be made when the AES electron gun and its power supplies become available. Ilan showed a nice CAD layout made by Jorg.

Conclusion of a power needs discussion is that building 939 has sufficient power. Ilan and Mike have been coordinating cryogenic matters with Mike Iarocci.

LDRD: Ilan is preparing a proposal for the 939 test facility development. A proposal for solenoid development is to be resubmitted. Deadline for LDRD submissions is April 2nd.

Simulation: is needed to optimize the location of the solenoid after the gun, since it can not straddle the AES gun. Dong indicated that without a solenoid the system would not work.

Miscellany: Dejan suggested to involve students in various aspects of the project. Suggested project title: E-Cool Test Facility.